

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 February 2004 (12.02.2004)

PCT

(10) International Publication Number
WO 2004/012912 A3

(51) International Patent Classification⁷: C06C 7/00

(21) International Application Number:
PCT/US2003/023615

(22) International Filing Date: 29 July 2003 (29.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/400,502 5 August 2002 (05.08.2002) US

(71) Applicant and

(72) Inventor: BASSETT, Carroll [US/US]; HC68 Box 64B,
Friars Hill, WV 24938 (US).

(74) Agent: HOLROYD, Mary-Jacq; Johnston, Holroyd &
Associates, 1438 Main Street, Princeton, WV 24740 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

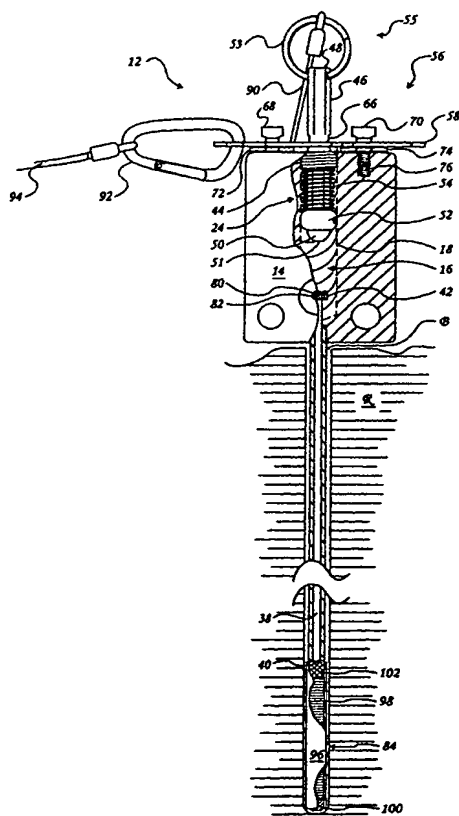
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

[Continued on next page]

(54) Title: HANDHELD TOOL FOR BREAKING UP ROCK



(57) **Abstract:** A tool (12) has a body (14) with a barrel (18) having oppos-
ing threaded and fitted openings (30 and 28). An actuator pin tube (26), for
slidably engaging an actuator pin (38) having a tip (40) opposing a retention
head (42), extending from the fitted opening (30). A spring assembly (24),
disposed in the barrel (18), has a hammer guide (44) engaged in the threaded
opening (28) with a hammer (46) slidably engaged therein, a handle mech-
anism (55) disposed at one end and a spring retainer (52) disposed adjacent
the other end of the hammer (46) before a hammerhead (51), and a spring
(54) engaged between the hammer guide (44) and the spring retainer (52).
A release mechanism (56) engages the hammer (46). A kit (108) containing
the tool (12) and a method of operating the tool (12) involving drilling and
cleaning a borehole, inserting a cartridge and tool therein, and detonating
the load remotely using a pull cord.